

[Handwritten signature]



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,011	11/17/2003	Chia-Chang Hu	MR2349-967	1947

4586 7590 06/21/2006

ROSENBERG, KLEIN & LEE
3458 ELLICOTT CENTER DRIVE-SUITE 101
ELLICOTT CITY, MD 21043

EXAMINER

SHAPIRO, LEONID

ART UNIT	PAPER NUMBER
----------	--------------

2629

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/713,011	Applicant(s) HU ET AL.	
	Examiner Leonid Shapiro	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Erten et al. (Pub. No.: US 2001/0030668 A1).

As to claim 17, Erten et al. teaches a cursor simulation device (See paragraph 0007), comprising:

a main system having a control program installed therein (See Fig. 1, item 10, paragraph 0040);

a projector (See Fig. 1, item 12, paragraph 0040);

a laser pointer pen (See Fig. 1, item 16, paragraph 0040); and

a camera embedded in the projector (See Fig. 1, items 12,14, paragraph 0040 and Fig. 12, item 32,14, paragraph 0045);

wherein the user uses the laser pointer pen to emit a laser beam, the camera embedded in the projector receive the laser beam, and then the laser beam signal is transformed into a digital signal to be transmitted to the control program in the main system for processing (See Figs. 1,3, paragraph 0040).

As To claim 18, the projector, the laser pen and the camera are common products on the market (See paragraph 0006 and 0041).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,6-8,9,14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erten et al.

As to claim 1, Erten et al. teaches a cursor simulator installed in a main system (See Fig. 1, items 10,12, paragraph 0040), the main system comprising a display device having a predetermined display frame for displaying a cursor (See Fig. 1, items 10,12, paragraph 0040), the main system being connected to an optical reading device (See Fig. 1, item 14, paragraph 0040), the optical reading device having a predetermined view scope (See Fig. 1, item 32, paragraph 0040), wherein when the optical reading device receives a plurality of first optical signals (in the reference detection of the pointing device) and a plurality of second optical signals (in the reference reflection on outside of outside display or only receives a plurality of second optical signals (See Fig. 12, items 14, 16, 32, paragraph 0046) the optical reading device transmits the first and second optical signals to the main system (See Fig. 1, items 10,14, paragraph 0040), and the main system transmits the first and second optical signals to the cursor simulator (in the reference is equivalent to software program in computer 10, Fig. 1), the cursor simulator comprising:

Art Unit: 2629

a receiving module for receiving the first and second optical signals (See Fig. 1, items 10,14, paragraph 0040);

a position corresponding module for corresponding the view scope of the optical reading device to the display frame of the display device so as to make each position in the view scope correspond to a position on the display frame (See Fig. 1, items 10,32, paragraph 0040);

a display module for detecting the position on the display frame corresponding to the position of the first or the second optical signal in the view scope and displaying the first or the second optical signal on a simulation display frame, wherein the simulation display frame comprises a plurality of optical signal display positions, and each optical signal display position corresponds to a specific position on the display frame (See Fig.1, items 10,32 and Fig. 12, items 14, 16, 32, paragraph 0046);

a wavelength parameter acquiring module for acquiring the wavelength parameter of the first optical signal according to a first color parameter of the optical signal display position before displaying the first optical signal and a second color parameter after displaying the first optical signal (in the reference: "invisible waves is a characteristic that system relies to distinguish the pointing device from the other objects in view..." (See paragraph 0046); and

a positioning module for reading the color parameter of each of the optical signal display positions on the simulation display frame, wherein when the color parameter is approximately equal to the wavelength parameter (in the reference: "invisible waves is a characteristic that system relies to distinguish the pointing device from the other objects

in view..." (See paragraph 0046), the positioning module will record the optical signal display position, and then generate a cursor simulating position according to the recorded optical signal display positions (See Fig. 1, items 10,32, paragraph 0040).

Erten et al. does not disclose cursor simulator, a receiving, display, a wavelength parameter acquiring and positioning modules.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention that all limitations of independent claim 1 as related to the modules are implemented by application software in Erten et al. reference.

As to claim 9, Erten et al. teaches a cursor simulating method applied in a main system (See Fig. 1, items 10,12, paragraph 0040), comprising a display device having a predetermined display frame for displaying a cursor, and a cursor simulator for executing the cursor simulating method (See Fig. 1, items 10,12, paragraph 0040), the main system being connected to an optical reading device (See Fig. 1, item 14, paragraph 0040), having a predetermined view scope (See Fig. 1, item 32, paragraph 0040), wherein when the optical reading device receives a plurality of first optical signals (in the reference detection of the pointing device) and a plurality of second optical signals (in the reference reflection on outside of outside display or only receives a plurality of second optical signals (See Fig. 12, items 14, 16, 32, paragraph 0046) the optical reading device transmits the first and second optical signals to the main system (See Fig. 1, items 10,14, paragraph 0040), and the main system transmits the first and second optical signals to the cursor simulator (in the reference is equivalent to software

program in computer 10, Fig. 1), and the cursor simulator of the main system executes the cursor simulating method, method comprising:

a position corresponding step for corresponding the view scope of the optical reading device to the display frame of the display device so as to make each position in the view scope correspond to a position on the display frame (See Fig. 1, items 10,32, paragraph 0040);

a displaying step for detecting the position on the display frame corresponding to the position of the first or the second optical signal in the view scope and displaying the first or the second optical signal on a simulation display frame, wherein the simulation display frame comprises a plurality of optical signal display positions, and each optical signal display position corresponds to a specific position on the display frame (See Fig.1, items 10,32 and Fig. 12, items 14, 16, 32, paragraph 0046);

a wavelength parameter acquiring step for acquiring the wavelength parameter of the first optical signal according to a first color parameter of the optical signal display position before displaying the first optical signal and a second color parameter after displaying the first optical signal (in the reference: "invisible waves is a characteristic that system relies to distinguish the pointing device from the other objects in view..." (See paragraph 0046); and

a positioning step for reading the color parameter of each of the optical signal display positions on the simulation display frame, wherein when the color parameter is approximately equal to the wavelength parameter (in the reference: "invisible waves is a characteristic that system relies to distinguish the pointing device from the other objects

Art Unit: 2629

in view..." (See paragraph 0046), the positioning module will record the optical signal display position, and then generate a cursor simulating position according to the recorded optical signal display positions (See Fig. 1, items 10,32, paragraph 0040).

Erten et al. does not disclose cursor simulator, displaying, a wavelength parameter acquiring and positioning steps.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention that all limitations of independent claim 9 as related to the steps are implemented by application software in Erten et al. reference.

As to claims 6-8, 14-16, Erten et al. teaches the position corresponding module automatically, manually or by corrections corresponds the view scope of the optical reading device to the display frame of the display device so that each position in the view scope corresponds to a position on the display frame (See paragraph 0007 and 0052).

3. Claims 2,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erten et al. as applied to claims 1,9 above, and further in view of Paul et al. (US Patent No. 7,050,606 B2).

Erten et al. does not disclose a floating parameter acquiring module for acquiring a floating parameter according to the different color parameters of the second optical signals displayed on the simulation display frame at different times, wherein the color

parameter is approximately equal to the wavelength parameter when a difference between the color parameter and the wavelength parameter is less than or equal to the floating parameter.

Paul et al. teaches a floating parameter acquiring module for acquiring a floating parameter according to the different color parameters of the second optical signals displayed on the simulation display frame at different times, wherein the color parameter is approximately equal to the wavelength parameter when a difference between the color parameter and the wavelength parameter is less than or equal to the floating parameter (See Figs. 1-5, Col. 5, Lines 3-68 and Col. 6, Lines 1-59).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Paul et al. into Erten et al. system in order to distinguish the signal and noise (see Col. 2, Lines 11-12 in the Paul et al. reference).

4. Claims 3-5,11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erten et al. as applied to claims 1,9 above, and further in view of Doi et al. (US Patent No. 6,266,061 B1).

As to claims 3-4,11-12, Erten et al. does not disclose switching module for switching the cursor simulator to between a command mode.

Doi et al. teaches a cursor simulator system comprising : a switching module for cursor simulator to be in command mode (a select mode or double click mode) » and a movement mode (cursor move mode) (See Fig. 1-3,20-22,abstract, Col. 1, Lines 47-51, Col. 2, Lines 8-49, Col. 7, Lines 23-36, Col. 13, Lines 20-36-68., Col. 14, Lines 1-11).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Doi et al. into Erten et al. system in order to improve input accuracy and the user operability (See Col. 13, Lines 29-31 in the Doi et al. reference).

As to claims 5 and 13, Dpi et al teach a command table comprising plurality of command (select or double click) and a plurality of command codes, each of the commands being corresponding to a command code, wherein the commanding module finds the command corresponding to the command code generated by the positioning module so that the cursor simulator generates and sends out the command (See Fig. 3,21-22, Col. 14, Lines 1-11).

Telephone Inquire


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS
06.17.06



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600